

Promoting the security of our Nation . . .



INSPECTOR GENERAL'S ASSESSMENT OF THE MOST SERIOUS MANAGEMENT CHALLENGES FACING NRC

September 30, 2005

MEMORANDUM TO: Chairman Diaz

FROM: Hubert T. Bell

Inspector General Hubert J. Seec

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF

THE MOST SERIOUS MANAGEMENT CHALLENGES

FACING NRC (OIG-05-A-23)

SUMMARY

On January 24, 2000, Congress enacted the *Reports Consolidation Act of* 2000 (the Act), which requires Federal agencies to provide financial and performance management information in a more meaningful and useful format for the Congress, the President, and the public.

Included in the Act is the requirement that, on an annual basis, the Inspector General of each Federal agency summarize what he or she considers to be the most serious management and performance challenges facing the agency and assess the agency's progress in addressing those challenges. In compliance with the Act, I am submitting my annual assessment of the most serious management challenges confronting the United States Nuclear Regulatory Commission (NRC). Also, included in this submission is a listing of Office of the Inspector General (OIG) audit

and investigative reports issued during FY 2005. These reports address the challenges identified.

Congress left the determination and threshold of what constitutes a most serious management challenge to the discretion of the Inspectors General. Therefore, I applied the following definition in preparing my statement:

Serious management challenges are mission critical areas or programs that have the *potential* for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals.

The most serious management challenges facing NRC may be, but are not necessarily, areas that are problematic for the agency. The challenges identified represent critical areas or difficult tasks that warrant high-level management attention. This year, I identified nine management challenges that I consider to be the most serious. These challenges are essentially the same ones identified last year, with minor title changes for challenges 3 and 4.



DISCUSSION

The most serious management challenges that follow are not ranked in any order of importance.

CHALLENGE 1

Protection of nuclear material used for civilian purposes.

NRC's Strategic Plan provides for "Excellence in regulating the safe and secure use and management of radioactive materials for the public good." NRC is authorized to grant licenses for the possession and use of radioactive materials (e.g., byproduct material, source material, and special nuclear materials) and establish regulations to govern the possession and use of those materials. NRC's regulations require that certain materials licensees have extensive material control and accounting programs as a condition of their license. All other license applicants (including those requesting authorization to possess small quantities of special nuclear materials) must develop and implement plans that demonstrate a commitment to accurately control and account for radioactive materials.

One of NRC's and the nuclear industry's highest priorities must be ensuring adequate protection of public health and safety. Heightened sensitivity to the control of special nuclear materials warrants NRC's serious attention to its licensees' material control and accounting activities. The challenges currently facing NRC will be to (1) ensure that there are adequate inspections to verify licensees' commitments to their material control and accounting programs, and a reliable special nuclear materials system; and (2) establish a means to ensure the accurate accounting for radioactive materials, especially those with the greatest potential to impact public health and safety.

- Byproduct material (1) Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. [Source: Atomic Energy Act of 1954, Section 11 (e)]
- b Source material Uranium or thorium or any combination thereof, in any physical or chemical form; or ores that contain by weight 0.05 percent or more of (1) uranium, (2) thorium, or (3) any combination thereof. Source material includes depleted uranium and natural uranium, but not "special nuclear material." [Source: Title 10 Code of Federal Regulations (CFR) Part 40.4]
- c Special nuclear material Plutonium, uranium-233, uranium enriched in the isotopes uranium-233 or uranium-235, and any other material which the Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or any material artificially enriched by any of the foregoing, but does not include source material. [Source: Title 10 CFR Part 74.4]

APPENDIXES AND ENDNOTES APPENDIX A

The NRC has proposed rulemaking for a National Source Tracking System effort to improve accountability and tracking of radioactive sources. The system is proposed as a cradle to grave tracking system of high risk sealed sources. The NRC has also worked with the Department of Energy (DOE) to facilitate recovery of selected orphaned sources. Further, NRC also issued security orders to selected material licensees requiring upgraded physical security.

NRC regulations require stringent design, testing, and monitoring in the handling and storage of spent nuclear fuel. In July 2005, NRC began site-specific spent fuel pool assessments to identify additional enhancements. Nine plant assessments were completed in July and an additional 57 assessments are scheduled for completion by the end of the calendar year.

Related Office of the Inspector General Work

Audits

- Audit of NRC's Baseline Inspection Program
- Audit of NRC's High-Level Waste Program
- Audit of NRC's Generic Communications Program
- Audit of the Decommissioning Program

Investigations

- Review of NRC Oversight of Licensee Fitness for Duty Program
- Inadequate Handling of Inspection Finding
- Adequacy of NRC Oversight of Lost Nuclear Material
- NRC's Oversight of the Hope Creek Nuclear Power Plant

CHALLENGE 2

Protection of information.

Information is an asset and must be protected. Information needing protection includes sensitive unclassified and classified information as well as computer security information.

Sensitive Unclassified and Classified Information

As a result of increased terrorist activity worldwide, NRC continues to reexamine its practice of releasing most documents to the public. NRC employees create and work on significant amounts of information that is sensitive and needs to be protected. Such information can be sensitive unclassified information or classified national security information contained in written documents and various electronic databases.

The agency has made strides in evaluating information that should be withheld from public release. There have been some instances, however, where stakeholders discovered certain documents that should have been publicly available, but instead were designated as non-publicly available. In other instances, sensitive unclassified documents including Safeguards Information (SGI) that should have been withheld were inadvertently released. In light of these occurrences, the agency needs to be particularly vigilant in determining which documents and information should be released.

NRC reviewed other areas to ensure the appropriate release of documents to the public. For example, the Sensitive Information Screening Project (SISP) has provided guidance on the handling of information that may be of benefit to terrorists and the treatment of such information. The agency also developed new guidance for handling sensitive unclassified information in the Agencywide Documents Access and Management System (ADAMS) that could potentially be useful to a terrorist. The Commission approved criteria for staff to use in performing reviews of documents to ensure that only appropriate information is publicly released.

The Executive Director for Operations (EDO) has emphasized the importance of being vigilant about documents sent via e-mail, because the implications of an inadvertent e-mail transmittal of sensitive unclassified or classified information can be enormous. The EDO reminded NRC employees that they should not send sensitive or classified documents through the e-mail system. In addition, on July 29, 2005, NRC issued a policy

reminder that camera-equipped cell phones pose a security as well as a privacy concern because they enable people to covertly photograph images or scenes and transmit them instantly to the Internet.

Computer Security

Computer security is the protection afforded to an information system in order to attain the objective of preserving the integrity, availability, and confidentiality of the information system resources (including hardware, software, firmware, information/data, and telecommunications).

The Federal Information Security Management Act (FISMA) was enacted on December 17, 2002. FISMA outlines the information security management requirements which all agencies must implement and report annually to the Office of Management and Budget (OMB) and Congress on the effectiveness of their security programs. This evaluation must include testing of the effectiveness of information security policies, procedures, and practices of a representative subset of the agency's information systems. In addition to the agency review, FISMA requires an annual evaluation to be performed by the Office of the Inspector General. This year's OIG evaluation discovered weaknesses in the following security controls: certification and accreditation process, automated information system inventory process, security controls for standalone personal computers and laptops, listed systems that process safeguards and/or classified information, and weaknesses in complying with many of the OMB requirements for FISMA implementation.

Related Office of the Inspector General Work

Audits

- Audit of NRC's Drug Testing Program
- Independent Evaluation of NRC's Implementation of the Federal Information Security Management Act (FISMA) for Fiscal Year 2005
- Audit of the Reactor Program System
- Audit of NRC's Telecommunications Program
- Audit of NRC's Policy and Practices Concerning Camera Cell Phones

Investigations

- Failure to Docket Licensee Information
- Follow-up to Inadvertent Releases of SGI to Unauthorized Individuals
- Mishandling of Allegation Regarding Design Basis Information

CHALLENGE 3

Development and implementation of a risk-informed and performance-based regulatory approach.

The Chairman has stated that NRC has increased its safety focus on licensing and oversight activities through application of a balanced combination of experience, deterministic models, and probabilistic analysis. This approach is known as risk-informed and performance-based regulation. However, NRC continues to face different challenges in making its regulatory framework more risk-informed for nuclear power plants and nuclear material licensees. Incorporating risk analysis into regulatory decisions improves the regulatory process by focusing both NRC and licensee attention and activities on the areas of highest risk. The result may be reducing unnecessary burden on licensees and increasing the efficiency and effectiveness of the agency's resources.

NRC conducts inspections at the Nation's 104 nuclear power reactors licensed to operate. The NRC Reactor Inspection Program and Reactor Performance Assessment Program are combined into a single program. This combined program implements the revised reactor oversight process (ROP). An integral part of the ROP is the baseline inspection program that was developed using a risk-informed approach to determine a comprehensive list of areas to inspect within seven established cornerstones of safety. While the baseline inspection program framework is generally sound, OIG identified opportunities for improvement. The baseline inspection program is the minimum inspection oversight that should be conducted at each nuclear power plant, but the agency lacks a mechanism to assess the overall effectiveness and quality of this critical program.

Another challenge is NRC's use of Probabilistic Risk Assessment (PRA). This challenge reflects NRC's commitment to increase the use of PRA technology in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the agency's approach and philosophy. Implementation of this policy is expected to improve NRC's regulation of licensees.

Related Office of the Inspector General Work

Audits

- Audit of NRC's Baseline Inspection Program
- Audit of NRC's Generic Communications Program

CHALLENGE 4

Ability to modify regulatory processes to meet a changing environment.

As a result of the changing regulatory and business environment, areas of increased emphasis exist. These areas are detailed in the NRC Strategic Plan. External as well as internal demands drive the NRC towards ensuring that it is more open in its regulatory processes. This openness results in a constant balancing of long-term improvement efforts and short-term emergent issues. NRC continues to face challenges related to its ability to address increased workloads associated with reactor license renewals, new plant licensing, licensee requests to increase power levels, and high-level waste disposal.

Reactor License Renewals

NRC's license renewal program is one of the major elements of its regulatory work. In accordance with the Atomic Energy Act, NRC approves and issues licenses for commercial power reactors to operate for up to 40 years. The Act allows the NRC to approve these licenses to be renewed for an additional 20 years. Among the nuclear power plants that have not yet had their license renewed, the first of these 40-year operating licenses will expire in 2009. Approximately 25 percent of the remaining licenses will expire by 2015. The decision whether to seek a renewal is the responsibility of the nuclear power plant owner(s). There continues to be a sustained strong interest in license renewal from utilities. To regulate this activity, NRC reviews the applicants' technical submittals and environmental application materials to verify information submitted in the renewal applications. An application for license renewal addresses technical and environmental issues.

New Plant Licensing

There is a growing list of United States utilities (licensees) that are publicly considering new plant construction in the U.S. NRC's licensing process outlined in 10 CFR Part 52 involves a review of Early Site Permits (ESP), Standard Design Certifications, and/or Combined Operating Licenses (COLs) for nuclear facilities. The COLs for nuclear power

facilities involves the issuance of a combined construction permit and a conditional operating license for a nuclear power facility. NRC is involved in several significant activities to ensure that it is prepared to review the first of these COL applications which is expected in 2007-2008. Some of these activities include:

- · Reviewing industry's guidelines for a COL application,
- Determining what actions are necessary to prepare for receipt of a COL application,
- · Assessing rulemaking activities for the licensing process, and
- Reviewing ESP applications.

Although the Part 52 application process has advantages for both NRC and the nuclear industry, it nevertheless, represents a significant challenge through the increased workload and pressure on the agency to create the infrastructure necessary to support review of new plant licensing applications.

Also, NRC has certified reactor designs, which the agency reviews and approves for general use. Licensees' use of a pre-approved design streamlines and shortens the NRC review process, ultimately paving the way for new reactors to be built and licensed.

Licensee Requests to Increase Power Levels

Many licensees have sought NRC approval to operate their plants at a higher power level than the level authorized in the original license by submitting a request to increase reactor power output. As of April 2005, the NRC approved over 105 power uprate increases. Over the next five years, licensees anticipate requesting additional power uprates, which will affect the ability of NRC staff to maintain established review schedules.

High-Level Waste Disposal

According to the Nuclear Waste Policy Act, the DOE has the responsibility to locate, design, build, and operate a repository for high-level nuclear waste. NRC has the responsibility to license and regulate this facility. Over the past several years, NRC has been preparing its license application review plan. DOE's plans to tender a license application to NRC for the construction of a permanent repository for high-level nuclear waste at Yucca Mountain in Nevada were delayed by a court ruling in FY 2004. The court ruling vacated the Environmental Protection Agency's (EPA) 10,000-year compliance period standard because it was not consistent with the recommendation of the National Academy of Sciences, as mandated by Congress. As a result, EPA needed to develop

public health standards for the planned high-level radioactive waste disposal facility at Yucca Mountain that will protect the public health for 1 million years. EPA posted a notice of the proposed standards in the *Federal Register*, established a period for public comment, and will hold public hearings on the proposed rule during the comment period. NRC is revising its regulations in this area, as Congress also mandated that NRC incorporate the EPA standards in its regulations. On September 8, 2005, NRC published a *Federal Register* notice proposing to amend its regulations to implement EPA's proposed standards.

The revised schedule for DOE to tender a license application has not yet been established. Because a multitude of issues will need review in a congressionally mandated 3- to 4-year time frame, NRC anticipates that the administrative proceeding to assess the repository will be an enormous undertaking. One significant challenge for NRC is ensuring that all parties to the licensing process and key decision makers have timely access to filings and exhibits involved with the licensing process.

An additional delay resulted from a ruling by an NRC Atomic Safety Licensing Board Panel that DOE improperly certified that it had met its regulatory obligation to make all of its documentary material related to Yucca Mountain electronically available via the NRC's Licensing Support Network. This ruling was a significant determination, as it is DOE's certification that starts a six-month clock for the earliest that NRC can docket DOE's Yucca Mountain license application. DOE has been working towards re-certifying that all of its documentary material related to Yucca Mountain is electronically available. As of July 2005, over 3 million documents had been loaded into the licensing support network. Recertification has not yet been rescheduled.

Given the events of FYs 2004 and 2005, the ability to modify regulatory processes to meet a changing environment will continue to be a prominent challenge for NRC in FY 2006, as it relates to NRC's high-level waste program.

Related Office of the Inspector General Work

Audits

- Audit of NRC's High-Level Waste Program
- Audit of the Reactor Program System
- Audit of NRC's Generic Communications Program

Investigation

Adequacy of NRC's Oversight of Vermont Yankee Power Uprate

CHALLENGE 5

Implementation of information resources.

Federal agencies' acquisition and implementation of information resources are crucial to (1) support critical mission-related operations and (2) provide more effective and cost-efficient Government services to the public. The necessary link of information technology (IT) to NRC's mission performance makes it important to have decision-making processes which ensure that funds are invested and managed to achieve high value outcomes at acceptable costs. NRC relies on a wide variety of information systems to help it fulfill its responsibilities and support its business flow. NRC, like other Federal agencies, continues to work towards obtaining a good return on these investments. In recent years, NRC has created large databases of publicly available information, including the High-Level Waste Meta System, the licensing support network (LSN), the NRC Web site, and the ADAMS public reading room.

The following sections highlight NRC's efforts to strengthen and support the agency's business needs using information technology strategies.

Project Management Methodology (PMM)

NRC is subject to several legislative mandates regarding its management of IT investments. The OMB has issued circulars that describe policies to be implemented at each agency. These policies are summarized and referenced in OMB Circular A-130, "Management of Federal Information Resources." In addition, the Clinger-Cohen Act of 1996 requires each Agency head to design and implement a Capital Planning and Investment Control process. The NRC developed PMM to address these requirements.

Homeland Security Presidential Directive 12 (HSPD-12)

On August 27, 2004, the President signed HSPD-12 requiring the development and agency implementation of a mandatory Governmentwide standard for secure and reliable forms of identification for Federal employees and contractors. According to HSPD-12, secure and reliable forms of identification means identification that:

- Is based on sound criteria for verifying an individual employee's identity;
- Is strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation;

APPENDIXES AND ENDNOTES APPENDIX A

- Uses electronic methods of rapid authentication; and
- Is issued only by providers whose reliability has been established by an official accreditation process.

The agency formed an HSPD-12 working group that includes representatives from the Office of Administration's Division of Facilities and Security/Security Branch; Planning, Budgeting, and Performance Management Team; and the Office of Information Services. This working group has been meeting on a bi-weekly basis to discuss the requirements and impact of HSPD-12 and the associated guidance publications.

NRC will have a challenge meeting the completion dates and having the resources to conduct the activities.

High-Level Waste (HLW) Meta System

NRC is developing the High-Level Waste Meta System (a system of systems) to support the agency's review and hearings pertaining to the DOE's anticipated application to build a high-level waste repository at Yucca Mountain. The HLW Meta System is the collection of interdependent software applications, procedures, and information technology needed to support NRC's business activities associated with the licensing process. For example, the system will interface with ADAMS and the licensing support network and will include an Electronic Information Exchange component to allow parties to submit, service, and access documents. It will also include the Electronic Hearing Docket, which will serve as the agency's official docket; the Digital Data Management System, which will submit exhibits and hearing transcripts to support hearing functions; and NRC's High-Level Waste Collection of records relevant to discovery. System development is expected to cost approximately \$9.5 million and NRC staff anticipates that much of the system will be certified and accredited by April 2006. The challenge for NRC will be to ensure that this important project stays on track in order to effectively support the upcoming license application review process.

Related Office of the Inspector General Work

Audits

- Independent Evaluation of NRC's Implementation of the Federal
- Information Security Management Act (FISMA) for Fiscal Year 2005
- Audit of the Reactor Program System

- Audit of NRC's Telecommunications Program
- Audit of NRC's Policy and Practices Concerning Camera Cell Phones

Investigation

Theft of Cash and Credit Cards at NRC Headquarters

CHALLENGE 6

Administration of all aspects of financial management.

Sound financial management includes implementation of new internal control requirements, preparation of financial statements in accordance with applicable requirements, and efficient and effective procurement operations. A brief discussion of these areas follows.

New Internal Control Requirements

NRC's challenge is to take systematic and proactive measures to implement new OMB internal control requirements which become effective in FY 2006. The Office of the Chief Financial Officer serves as the agency lead to implement the new requirements of OMB Circular No. A-123 Revised, *Management's Responsibility for Internal Control*, December 21, 2004. This Circular provides Federal managers with guidance on improving the accountability and effectiveness of Federal programs and operations by establishing, assessing, correcting, and reporting on internal control. The Circular, among other things, emphasizes the need for integrated and coordinated internal control assessments that synchronize all internal control-related activities. It provides updated internal control standards, as well as new specific requirements for conducting management's assessment of the effectiveness of internal control over financial reporting.

Financial Statements

While NRC received an unqualified audit opinion on its FY 2004 financial statements, the audit opinion on the agency's FY 2003 financial statements was revised from unqualified to qualified due to the lack of evidential matter to support the completeness of accounts receivable and revenue. The agency's independent auditors characterized NRC's fee billing system as a material weakness.

Procurement

NRC's procurement of goods and services must be made in accordance with Federal regulations and with an aim to achieve the best value for the agency's dollars in a timely manner. Agency policy provides that the NRC's procurement of goods and services support the agency's mission and be planned, awarded, and administered efficiently and effectively. Among the numerous challenges facing the Agency in these areas are:

- Hiring and training new contract personnel,
- Keeping current with the Federal Acquisition Regulation (FAR),
- Ensuring adequate competition in awarding contracts,
- Considering past-performance in awarding contracts,
- Identifying the need for contract audit services, and
- Monitoring purchase card transactions.

An additional challenge facing the agency is the need to focus efforts on compliance with the FAR time standards for closing expired contracts and prompt deobligation of excess funds, which would make those funds available for other agency priorities.

Related Office of the Inspector General Work

Audits

- Results of the Audit of the U.S. Nuclear Regulatory Commission's Financial Statements for Fiscal Years 2004 and 2003
- Independent Auditors' Report on the U.S. Nuclear Regulatory Commission's Special-Purpose Financial Statements as of September 30, 2004, and for the Year then Ended
- Independent Accountants' Report on the Application of Agreed-upon Procedures for Federal Intragovernmental Activity and Balances as of September 30, 2004
- Review of NRC's Implementation of the Federal Managers' Financial Integrity Act for Fiscal Year 2004
- Audit of the Budget Formulation Process
- Audit of NRC's Contract Closeout Process

Investigations

- Fraudulent Workers' Compensation Program Claim by NRC Employee
- Fraudulent Workers' Compensation Program Claim of Former NRC Employee
- Failure to Report Billing Errors to Independent Auditors
- Mischarging of Costs by NRC Contractor
- False Reporting of Recyclable Material by Government
- Misuse of Government Travel Card by SBCR Employee
- NRC Mischarging EPRI for Reviewing Generic Products
- Misuse of NRC Travel Card by ACRS Member
- Misuse of NRC Travel Card by OIP Employee
- Fraudulent Use of NRC Purchase Card
- False Claim of Small Business Status by NRC Licensee
- Fraudulent Use of NRC Travel Card Account Number by Persons Unknown
- Misuse of NRC Citibank Travel Card by Region I Employee

CHALLENGE 7

Communication with external stakeholders throughout NRC regulatory activities.

The NRC believes that nuclear regulation is the public's business and, therefore, it should be transacted in an open and candid manner in order to maintain the public's confidence. Therefore, management should ensure that there are adequate ways of communicating with and obtaining information from external stakeholders that may have a significant impact on the agency achieving its goals. NRC established a strategic goal which ensures openness that expressly recognizes that the public must be informed about, and have a reasonable opportunity to participate in, the regulatory processes. Because of the nature of its business, the agency needs to interact with a diverse group of external stakeholders (e.g., the Congress, general public, other Federal agencies, and various industry and citizen groups) with clear, accurate, and timely information about NRC's regulatory activities. This continues to be a challenging task.

To this end, the agency has initiated efforts to improve cooperation and also enhance public outreach with specific stakeholders. NRC's Congressional Outreach program has produced favorable results. The program was initiated in 2005 and is directed at ensuring that the Congressional District offices are informed of NRC's activities in their

Districts. Information discussed in this venue is broad and can include such items as security, high-level waste, spent fuel storage, NRC organization, and programs such as reactor oversight, materials, and Agreement States.

Related Office of the Inspector General Work

Audits

- Audit of NRC's Baseline Inspection Program
- Audit of NRC's High-Level Waste Program
- Audit of NRC's Generic Communications Program
- Audit of the Reactor Program System

Investigations

- Inaccurate Information Provided by NRC to Congressman
- Mishandling of Allegation by NRR Staff

CHALLENGE 8

Intra-agency communication (up, down, and across organizational lines).

Effective intra-agency communications should occur with information flowing up, down, and across the organization. Information should be communicated to management and others within the organization who need it and in a form, and within a time frame, that enables them to carry out their responsibilities.

NRC has instituted various actions to improve its internal communications over the past year. The Director of Communications and technical communications assistants are working to continually improve this area. The agency continues to produce electronic "EDO Updates." These represent timely and succinct communications between the EDO and the entire staff. NRC's internal Web site addresses different types of employee concerns. NRC continues to hold "All Employees" meetings as a mechanism for direct two-way communication between the Commission and agency staff. Also, NRC's Strategic Plan stresses the importance of the role of internal communications in achieving the agency's mission and goals.

The Office of the Executive Director for Operations' (OEDO) internal web page provides various guidance to the staff, including guidance on communicating with the Commission, the OEDO mission and history, new and archived EDO updates, senior manager biographies, and OEDO staff contacts for various NRC program offices and topics.

The agency has made progress on the "roadmap initiative" which is intended to be a planning tool used to give the EDO's office a six month view of office and regional products, allowing early incorporation of senior management views, and reducing burden by minimizing re-writes and last minute changes in direction. To improve connectivity, Office Directors place their monthly roadmap reports in an ADAMS folder for access by other Office Directors and Regional Administrators to determine whether there are products that may require input or coordination.

Related Office of the Inspector General Work

Audits

- Audit of NRC's Baseline Inspection Program
- Audit of NRC's High-Level Waste Program
- Audit of the Budget Formulation Process

Investigation

• Failure to Report Billing Errors to Auditors

CHALLENGE 9

Managing human capital.

NRC faces current and emerging staffing challenges that could affect its ability to maintain the skills base needed to carry out the agency's mission. One of the challenges faced, along with the rest of the Federal Government, is an aging workforce. Retirement accounts for just over half of NRC's attrition, which most directly depletes the knowledge base. This makes identification of probable retirements and plans for successful replacement of those skilled individuals a high priority.

APPENDIXES AND ENDNOTES APPENDIX A

The challenge to be met by the NRC is preparing to replace an increasing number of individuals who become eligible to retire, taking with them valuable skills and institutional knowledge. However, not all individuals retire immediately upon eligibility. At NRC, on average, employees stay about four years beyond their retirement eligibility date.

NRC's workforce must possess detailed knowledge and specialized technical skills to fulfill its public health and safety mission. To maintain this expertise, NRC will need to build its human capital in the technical, financial, and administrative areas. In its Strategic Plan, NRC identified the management of human capital as a major challenge because of declining workforce numbers, loss of institutional knowledge and critical skills, and a shrinking labor pool.

NRC periodically assesses its human capital situation looking for ways to make improvements to support the achievement of its mission and goals. Agency efforts in critical skills staffing and training/development are described as follows:

Critical Skills Staffing

NRC currently uses a wide variety of human capital policies and programs for recruiting, hiring, training and development, and retention. The agency is challenged by preparing for growth in current and emerging work requirements including license renewals, applications for power uprates, potential licensing for high-level waste, and new reactor projects. These factors will require an increase in staff resource needs. Uncertainty of licensee schedules complicates the agency's efforts to have staff available with the right skills at the right time.

NRC measures the skills supply and demand using a strategic workforce planning web-based tool. The system provides a means for managers to specify their near-term and long-term skill needs and provides employees with a way to indicate their level of expertise in these skills areas. The agency completes an annual information call where managers identify continuing and newly anticipated skill gaps. Once this information is analyzed, the Office of Human Resources works with managers to plan and implement skill gap closure strategies.

Training/Development

The purpose of strategic planning for training and development is to ensure that processes, infrastructure, evaluation, and feedback methodologies are in place so that the agency's training and development activities mature and maintain the critical knowledge competencies needed to execute the agency's strategic mission. To accomplish this, the Office of Human Resources is developing a Strategic Plan for training and development, which outlines a training and development vision, mission, and strategic outcome for the agency. The focus is on alignment with agency goals and strategies and to provide for training support for staff. NRC's plan in this area outlines a number of goals, some of which include:

Focus on optimizing resources spent to conduct high quality training to meet the needs of a diverse workforce,

- Provide and support comprehensive, integrated, competency-based programs for staff, and
- Use training resources (expertise, facilities, equipment, and analytical tools) to
 effectively support other agency programs, including incident response and
 international activities.

Related Office of the Inspector General Work

Audit

• Audit of NRC's Baseline Inspection Program

CONCLUSION

Although the nine challenges identified in this report on the last page are distinct, they are also interdependent. One of the OIG's strategic goals is to improve the economy, efficiency, and effectiveness of NRC corporate management. The Inspector General's identification of the most serious management challenges facing the agency and the OIG's commitment to ensuring the integrity of NRC programs and operations help achieve this goal. Further, as evidenced by this review, the agency continues to take steps to address the management challenges through planning and in day-to-day operations.

Most Serious Management Challenges Facing the Nuclear Regulatory Commission as of September 30, 2005 (as identified by the Inspector General)

Challenge 1	Protection of nuclear material used for civilian purposes.
Challenge 2	Protection of information.
Challenge 3	Development and implementation of a risk-informed and performance-based regulatory approach.
Challenge 4	Ability to modify regulatory processes to meet a changing environment.
Challenge 5	Implementation of information resources.
Challenge 6	Administration of all aspects of financial management.
Challenge 7	Communication with external stakeholders throughout NRC regulatory activities.
Challenge 8	Intra-agency communication (up, down, and across organizational lines).
Challenge 9	Managing human capital.

ACTIONS TO ADDRESS THE NRC'S MANAGEMENT CHALLENGES

This appendix lists the management challenges that the NRC's Inspector General identified for FY 2005 in an October 4, 2004, letter to Chairman Diaz, and discusses the actions that the agency has taken to address those challenges.

1. Protection of nuclear material used for civilian purposes

The NRC continues to enhance current security measures to ensure adequate protection of the Nation's nuclear materials and facilities. In FY 2005, the agency used a risk-informed approach to assess the potential vulnerabilities of civilian nuclear facilities and activities. The agency coordinated its activities with the Homeland Security Council, the Department of Homeland Security, the Federal Bureau of Investigation, the Department of Energy, the Defense Threat Reduction Agency, and other agencies.

The NRC's comprehensive oversight of the security and safeguards of NRC-licensed nuclear facilities and activities resulted in the following significant improvements in FY 2005:

The NRC issued a rule on fitness-for-duty and an order on access authorization. These actions, together with previously issued guidance on the revised design basis threat and Commission orders to implement security enhancements, will represent a significant advance in security planning.

The NRC revised its baseline inspection program for the physical protection cornerstone of the Reactor Oversight Process. This revised baseline inspection program reflects changes imposed by the Commission's orders in the areas of access authorization, fatigue, security officer training and qualification and the design basis threat. The NRC began implementing the revised baseline inspection program in FY 2004. The NRC also developed improved performance indicators and a revised Significance Determination Process to measure licensees' security performance more effectively.

Consistent with the Commission's orders revising the design basis threat, each licensee that operates a power reactor or a Category I fuel cycle facility (strategic special nuclear material in any combination in a quantity of 5000 grams or more computed by the formula grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium) submitted a revision of its physical security plan or plans, contingency response plan or plans, and training and qualification plan or plans for NRC staff approval in April 2004.

APPENDIXES AND ENDNOTES APPENDIX B

The NRC staff finished reviewing these plans by October 2004. Full implementation of these plans significantly increased the licensees' ability to defend their facilities against a comprehensive set of adversary characteristics.

In FY 2004, the agency completed a series of assessments that provided the technical bases for additional mitigative measures that may be required to protect the Nation's nuclear materials and facilities.

In FY 2004, in collaboration with the Department of Homeland Security, the Department of Energy, and other Federal agencies, the NRC continued to assess the potential use of radioactive sources in radiological dispersion devices and to identify necessary enhancements in the control of radioactive sources. As a result, the agency has enhanced the security requirements for licensees who hold radioactive material(s) designated as radionuclides of concern. The NRC staff also worked with the Agreement States to develop appropriate enhancements for lower priority high-risk sources. In FY 2005, the agency moved to enhance its nuclear material management and safeguards system and codified a list of radioactive sources for import and export in 10 CFR Part 110. This list was developed to reflect efforts by the International Atomic Energy Agency and the Department of Energy/NRC working group. The NRC expects to move forward with its national source tracking system rulemaking in FY 2006. In addition, working with the Homeland Security Council, its oversight committees in Congress, the Administration, and other Federal agencies, the NRC continues to support legislative proposals to enhance the security of nuclear materials and facilities. A number of NRC's security-related legislative proposals (and others not requested by the NRC) were included in H.R.6, the Energy Policy Act of 2005, enacted on August 8, 2005. For example, Section 651(d) of the act establishes a new task force of Federal agencies, headed by the Chairman of the NRC, to evaluate and provide recommendations to the Congress and the President on security of radiation sources in the United States from potential terrorist threats. Section 651(d) also requires the NRC to enter into an arrangement with the National Academy of Sciences to conduct a study of industrial, research and commercial uses for radiation sources and to submit the results of the study to the Congress within 2 years of enactment of this provision. Section 652 expands the requirement to conduct fingerprinting, for criminal history record checks, to broader classes of entities and individuals. Section 653 authorizes NRC to allow security guards at certain licensed facilities to possess more powerful weapons and Section 654 makes it a Federal crime to introduce, without authorization, weapons or explosives into NRC-regulated facilities designated by the Commission.

The act also requires NRC to undertake several security-related activities which the agency has already done or is doing. Section 651(d) requires the agency to issue regulations governing the import and export of radioactive sources and also to issue regulations establishing a radioactive source tracking system. As noted above, NRC issued a final rule on export and import of radioactive sources and published a proposed rule on its National Source Tracking System in FY 2005. Section 651 (a) requires the NRC to conduct security evaluations, including force-on-force exercises, at least once every three years at facilities designated by the NRC and to report to Congress annually on the evaluations. While the reporting requirement to Congress is new, the Agency has been conducting force-on-force exercises for some time at reactors and Category 1 fuel facilities.

In FY 2005, the NRC staff developed a plan for implementation of these and other applicable requirements of the act in FY 2006 and beyond.

The NRC expanded and strengthened its information security program, which permits routine sharing of classified and sensitive unclassified information with authorized representatives up to the "secret national security information" level. The NRC has significantly enhanced secure communication capabilities at headquarters and the regional offices. In so doing, the NRC ensured timely communication among authorized individuals while effectively protecting classified and sensitive unclassified information (both internally and externally) through the use of administrative procedures and requirements that are consistent with Federal law and national programs. In FY 2005, the NRC finished installing, certifying, and accrediting 12 secure video sites in headquarters and the regions. The NRC continued to interact, communicate, and coordinate with other Federal, State, and local agencies, and the international community with respect to homeland security, emergency response, and integrated response planning. The NRC successfully responded to several unique events, as well as two inadvertent overflights of the Washington, D.C. metro area. The NRC continues to work with the Department of Homeland Security and other Federal agencies to implement and administer a National Incident Management System and a unified National Response Plan in accordance with Homeland Security Presidential Directive 5, "Management of Domestic Incidents." The NRC continued to implement upgrades to the agency's Incident Response Operations Center in FY 2005 with a top to bottom review of the entire incident response center and plans, and the development of a long term Incident Response Improvement Plan, which will significantly enhance the agency's response center. The NRC established an alternative incident response center at one of the agency's regional offices. This alternative center has all of the capabilities of the headquarters operations center, in the event of a loss of the headquarters facility.

In FY 2004, the NRC completed a pilot force-on-force exercise program which administers an exercise to provide a more realistic test of plant capabilities to defend against an adversary force. This effort reduced artificialities and increased the realism of the exercises. The agency has also used the results of the expanded pilot exercises to revise the staff's exercise program and improve the NRC's processes for assessing licensees' readiness to respond to the design-basis threat. The exercise provides details regarding specific adversary characteristics against which security forces at nuclear power reactors and Category I fuel cycle facilities (facilities that process strategic special nuclear material) need to be protected.

The NRC met regularly with industry representatives to catalog and discuss the lessons learned from the exercises, documenting the staff's and the industry's perspectives. In implementing the force-on-force program, the NRC increased the frequency of force-on-force drills at power reactor facilities from once every eight years to once every three years. As intended, force-on-force exercises have been a primary means to conduct performance-based testing of a licensee's security plan and its ability to prevent radiological sabotage. In FY 2005, the agency completed a transitional force-on-force exercise program and followed up with full program implementation. In FY 2005, the exercise evaluated one-third of its licensees through the force-on-force exercise program.

Finally, the agency completed its interactions with the National Academy of Sciences on a highly visible spent fuel storage report and reported the results to the Congress.

2. Protection of information

In FY 2005, the NRC faces several challenges to ensure compliance with the Federal Information Security Management Act. The NRC's current certification process is revealing previously undiscovered security risks and some slippage in system certification. The NRC staff has increased its efforts to provide more rigorous independent review, testing, and evaluation of major system security plans. The staff is also developing standardized information technology security solutions to minimize costs and provide the right level of protection, while complying with the Federal Information Security Management Act. The NRC has an effective information technology security training and awareness program. All employees are required to complete an online information technology security training course, and NRC information systems security officers and other employees and support contractors with significant security responsibilities are required to complete a more advanced online technical security course. The NRC maintains an information technology security Web page to promptly

inform NRC employees of information technology security issues. The NRC has a robust incident reporting program in place, and files monthly reports to the Federal Computer Incident Response Center.

New policies for Federal agency public Websites: On December 17, 2004, the Office of Management and Budget issued M-05-04, "Policies for Federal Agency Public Websites," to heads of executive departments and agencies. The document contains new e-Government guidance to bring agencies' public web sites into compliance with Federal information resource management laws and policy. These are new requirements to ensure that agencies manage their Federal agency public Websites as part of their information resource management program. The guidance also identified several new Office of Management and Budget policies with which agencies must be fully compliant by December 31, 2005. Similarly, on January 21, 2005, the National Archives and Records Administration issued to Federal Agency Contacts, Modern Records Programs 14.2005, "NARA Guidance on Managing Web Records." The National Archives and Records Administration guidance described agency Website operations as an integral part of an agency's program that contains both content and administrative Federal records that agencies must manage properly. To implement the new Office of Management and Budget and the National Archives and Records Administration guidance, the NRC has developed an action plan to evaluate its Web records, conduct risk assessments to identify improperly managed records, and prepare records disposition schedules for the content and administrative Web records, as appropriate.

3. Development and implementation of a risk-informed and performance-based regulatory oversight approach

For many years, the NRC has developed and adapted methods for undertaking probabilistic risk assessments and performance assessments to enable the agency to better understand the risks of licensed activities. During FY 2005, the NRC used these methods by supporting the development of calculation tools and experimental results to provide the basis for risk-informed regulation. Risk-informed regulation uses risk analysis, along with engineering studies, to focus regulatory and licensee attention on design and operational issues in a manner that is commensurate with the risks that the issues pose to public health and safety. Incorporating risk analysis into regulatory decisions improves the regulatory process by focusing NRC and licensee attention and activities on the areas of highest risk, thereby reducing unnecessary burden on licensees and increasing efficiency and effectiveness in the use of agency resources.

The NRC's FY 2004–FY 2009 Strategic Plan states that future challenges to the agency's regulatory climate are expected to require adjustment to both internal and external factors, such as the use of risk-informed and, as appropriate, performance-based regulations. To further the goal of broadly applying risk techniques to the agency's regulatory processes, the NRC developed the Risk-Informed Regulatory Implementation plan. The NRC has included milestones in the Risk-Informed Regulatory Implementation plan as performance measures in working toward making the agency's activities and decisions more effective, efficient, and realistic. During FY 2005, the NRC has taken agencywide actions across the agency to meet this challenge, as described in the following paragraphs.

Nuclear Reactor Safety

Based on its assessment of stakeholder feedback and the results and lessons learned from self-assessments during FY 2005, the NRC staff believes that the Reactor Oversight Process has satisfied the Commission's direction to develop an oversight process that is more objective, risk-informed, understandable, and predictable than previous processes. The staff plans to continue annual self-assessments and report on lessons learned from the implementation of the Reactor Oversight Process to the Commission. During FY 2005, the staff also revised inspection procedures to incorporate recommendations from the Davis-Besse Lessons Learned Task Force and tested the effectiveness of a new procedure for engineering design inspections that focuses on aspects of the plant design that represent a relatively high degree of risk and for which there appear to be relatively low margin. The procedure was implemented at one site in each of the four NRC regions. The staff concluded that aspects of the pilot inspection approach resulted in improvements that should be incorporated into the baseline inspection program. The staff plans on incorporating these attributes into a revised baseline inspection procedure to be implemented beginning January 2006.

Development of the Mitigating Systems Performance Index continued during FY 2005. These performance indicators provide a more accurate indication of the risks associated with changes in the availability and reliability of important safety systems. The index is based on risk-significant functions and uses plant-specific risk models and importance measures. The staff has completed a one year pilot of the Mitigating Systems Performance Index. In SECY-04-0053, the staff documented several technical issues that were unresolved at the completion of the pilot program. Those issues have now been resolved and the staff agreed to move forward with Mitigating Systems Performance Index Implementation. The staff and industry are working together to address implementation issues. A current target date for full implementation is set for January 2006.

The staff continues to work on initiatives, defined by the Significant Determination Process Task Action Improvement Plan, to address timeliness and other improvements to the Significance Determination Process. The Significance Determination Process is used to assess the safety significance of reactor events and inspection findings.

In FY 2005 the NRC staff added a new methodology to the Significant Determination Process which provides NRC inspectors the tools needed to assess the risk significance of identified fire protection issues and provides the tools needed to assess the risk significance of inspection findings related to licensee assessment and management of risk associated with performing maintenance activities under all plant conditions. Additionally, a significance determination process to assess inspection findings related to spent fuel storage is in development and the need for a new methodology is being examined for assessing findings associated with the performance of the on-site fire brigade.

During FY 2005, consistent with the Commission's policy statements on technical specifications and the use of probabilistic risk assessment, the NRC and the industry continued to develop risk-informed improvements to the current system of technical specifications. These improvements are intended to maintain or improve safety while reducing unnecessary burden and to bring technical specification requirements into congruence with the Commission's other risk-informed regulatory activities. In FY 2005, the NRC approved a variety of risk management technical specification initiatives, including: (1) allowances for a risk-informed evaluation to determine whether it is preferable to shut down or to continue to operating a reactor plant under certain degraded conditions, and (2) flexibility in determining the required actions to be taken when certain support equipment is not operable but can still function, (3) flexibility in determining short term technical specification required actions end states for repairing inoperable equipment, and, (4) flexibility in transitioning up in mode to power operation with inoperable equipment that is to be restored to operable status within the technical specification required action completion time. The NRC continued the review of an industry proposal for risk management of allowed outage times for technical specification equipment.

In February 2004, the NRC has issued for trial use Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of PRA Results for Risk-Informed Activities," and the associated Standard Review Plan Chapter 19.1, "Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities." This Regulatory Guide provides guidance to licensees concerning the quality needed for probabilistic risk assessment information used in risk-informed activities. A trial use period was scheduled to test the implementation of the guide through a variety

of different risk-informed applications. Five licensees volunteered to participate as a pilot plant during the period of trial use. The pilot applications conducted for the trial use period were completed in March 2005. In July 2005, American Society of Mechanical Engineers issued an addendum to its standard based on lessons learned from the pilots. Pending the timely issuance of American Society of Mechanical Engineers' revised standard, RG 1.200, Revision 1, is scheduled to be issued for use in FY 2006.

In FY 2005, the NRC staff completed the development of the technical basis necessary to support a risk-informed rulemaking effort to modify the pressurized thermal shock screening criteria in 10 CFR 50.61. The reports which document this technical basis will be published in December 2005 and represent the final revision of the draft technical basis report which was issued on December 31, 2002. This technical basis was reviewed at various stages by the NRC's external stakeholders, a select external peer review panel of technical and regulatory experts, the Advisory Committee for Regulatory Safeguards, and NRC technical staff. At this time, the staff expects to recommend that the rulemaking process to revise 10 CFR Part 50.61 be initiated and to submit a rulemaking plan to the Commission in FY 2006.

Staff efforts to develop an alternative risk-informed and performance based fire protection option for nuclear power plants carried forward into FY 2005. An industry standard, National Fire Protection Association 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition," was issued in April 2001. The final rule to incorporate National Fire Protection Association 805 in 10 CFR Part 50.48) was published in the *Federal Register* in June 2004. The staff worked with the industry to complete development of the implementation guidance for National Fire Protection Association 805 that was endorsed by the NRC via a regulatory guide. The regulatory guide was published in the *Federal Register* for a 60-day public comment period in October 2004. The staff plans to issue the final regulatory guide in March 2006. The industry is preparing a revision to the implementation guide to incorporate additional NRC guidance. NRC staff are also developing accordant inspection procedures that are expected to be completed in December 2005.

Efforts persist to resolve issues related to the requests for additional information on the Risk Management Technical Specifications Initiative 4b, Risk Informed Completion Time (including the Industry Risk Management Guide, the Combustion Engineering pilot proposal, Technical Specifications Task Force No. 424, and the South Texas Project pilot submittal). The industry provided a draft Industry Risk Management Guide and the Combustion Engineering Owner's Group single system pilot proposal, Technical Specifications Task Force-424, on January 21, 2003. In addition, the South Texas Project submitted a whole-plant proposal in support of the Risk Management Technical

Specifications Initiative 4b and on Probabilistic Risk Assessment quality, Regulatory Guide 1.200, in August 2004. The NRC staff has issued requests for additional information for the Industry Risk Management Guide, the Combustion Engineering pilot proposal, Technical Specifications Task Force-424 and South Texas Project submittals, and briefed the Advisory Committee Reactor Safeguards full committee in May 2004 and the Advisory Committee Reactor Safeguards subcommittee in June 2005. The expected completion date for CE initiative 4b, involving single High Pressure Safety Injection system application, is summer 2006.

The NRC staff continued its work to improve the requirements contained in 10 CFR 50.46 as they relate to analysis of design-basis large-break loss-of-coolant accidents and associated emergency core cooling performance and analysis. The NRC staff also proceeded with a number of related activities, including developing frequency estimates for loss-of-coolant accidents and working on a proposed rule to allow use of an alternative maximum break size. The development of a risk-informed approach to 10 CFR 50.46 has the potential to improve significantly the effectiveness of regulatory oversight related to emergency core cooling system performance. In August, 2004, the staff published a conceptual basis and draft language for the proposed rule and held a public meeting. During FY 2005, the staff evaluated information received at the public meeting and provided the Commission with a memorandum summarizing the proposed rule and providing draft language on October 22, 2004. The staff also met with the Advisory Committee Reactor Safeguards subcommittee once and with the full committee three times. An Advisory Committee Reactor Safeguards letter dated March 14, 2005 was supportive of the proposed rule. The proposed rule making package went to the Commission on March 29, 2005. The Commission issued a Staff Requirement Memorandum on July 29, 2005, approving the rule with changes. The rule went to administrative publications in mid October 2005.

With regard to achieving coherence among risk-informed activities, the staff issued a draft revision to the Coherence Plan in December 2004 for internal review and comment. However, in June 2005, further work on development of a revised coherence plan was suspended. The coherence plan has been subsumed by staff efforts to respond to recent Commission direction contained in Staff Requirement Memorandum 050405 to develop a formal program plan to make a risk-informed and performance-based revision to 10 CFR Part 50. The staff plans to inform the Commission of possible approaches to developing this formal program plan in FY 2006.

In 2001, the NRC staff initiated a program with the objective of creating an environment in which risk-informed methods are integrated into staff activities, and staff plans and actions are naturally based on the principles of risk-informed regulation. The

program has four phases: (1) evaluate the current environment, (2) design an improved risk-informed environment, (3) implement changes to achieve the target environment, and (4) assess effectiveness of environmental changes. Phases 1 and 2 have been completed. A plan for implementing changes to enhance the current environment was developed. Phases 3 and 4 are on hold, pending higher priority work (associated with Nuclear Security and Incident Response).

Nuclear Materials and Waste Safety

Over the past year, the NRC made significant progress toward increasing the use of risk insights and information where feasible and beneficial. The agency is currently developing guidance documents and risk guidelines to facilitate consistent and effective application of the risk-informed approach.

In FY 2004, the NRC completed feasibility/scoping study to identify human reliability analysis development needs for the wide range of situations encountered and activities performed by licensees subject to the Nuclear Materials Safety program. Based on this study, in FY 2005 the NRC has begun to prioritize human reliability analysis needs in the Nuclear Materials and Waste Safety program. In addition, the staff has begun developing human reliability tools and information to address a high priority need in the area of nuclear medical devices. Also, tasks have been initiated to develop human reliability tools and information to address a high priority need in the area of spent fuel handling.

The NRC identified nuclear material safety and safeguards regulatory applications that are amenable to increased use of risk insights and evaluated recommendations to improve the effectiveness and efficiency of the byproduct materials program. Several byproduct materials guidance documents were revised to incorporate risk insights, specifically those addressing technical assistance requests, Consolidated Guidance about Materials Licensees (NUREG-1550), and Inspection Manual Chapter 2800, "Materials Inspection Program." In FY 2005, the NRC continues its efforts to risk-inform the nuclear materials program. The NRC revised one guidance document, NUREG-1556, Volume 9, to incorporate risk insights to conform to the amended training and experience requirements for medical use of byproduct material.

In addition, the NRC has been working during FY 2005 to revise the Fuel Cycle Oversight Program in accordance with new 10 CFR Part 70 risk-informed regulatory requirements. The NRC is making progress in developing and implementing methods for risk-informed licensing reviews and risk-informed inspections.

The NRC continues to incorporate lessons learned into guidance development so the agency can apply risk-informed approaches consistently and effectively where appropriate. In FY 2005, the staff drafted a guidance document on Risk-Informed Decision Making for Materials and Waste Applications, to aid in using a risk-informed decision-making process on applicable regulatory issues in the Nuclear Materials Safety area. This document is currently undergoing final reviews prior to issuance.

In FY 2005, the NRC continued work on a probabilistic risk assessment of a dry cask storage system. This probabilistic risk assessment study provides a method for quantifying the risks of dry cask storage of spent nuclear fuel and provides insights for improved decision-making concerning regulatory activities associated with 10 CFR Part 72.

In FY 2005, the NRC staff issued Revision 1 of NUREG-1762, "Integrated Issue Resolution Status Report." This report consolidates information on the closure of issues concerning the prospective license application for a geologic repository at Yucca Mountain. The NRC and the Center for Nuclear Waste Regulatory Analysis completed the risk analyses for risk insights. The analyses enhanced understanding of significant issues in the risk insights baseline. The staff concluded that no modifications of the April 2004 Risk Insights Baseline Report were required. The Risk Insights Baseline Report supported the completion of pre-licensing issue resolution agreements and is being used by the staff in preparing for the review of a potential license application for the Yucca Mountain high level waste repository.

In FY 2005, the NRC staff continued regulatory improvements to resolve the issues that were identified in the staff's 2003 evaluation of implementation of 10 CFR Subpart E, the license termination rule. These improvements better incorporate risk insights in implementing the License Termination Rule. The staff has begun the process for developing regulations to prevent future legacy sites and is revising the decommissioning guidance for the following issues: restricted use/institutional controls; on-site disposal approvals; more realistic exposure scenarios; and the use of intentional mixing of soil. The staff conducted a decommissioning workshop to seek early licensee and other stakeholder input on the scope of this guidance and plans on publishing draft guidance in September 2005 for public comment. The staff has also implemented a communication strategy to expand stakeholder involvement by conducting the decommissioning workshop noted above, establishing a State working group for the guidance development, publishing a decommissioning program brochure, and enhancing the decommissioning Web page. The staff is also exploring new ways to

share decommissioning experience and lessons learned with other groups involved with decommissioning such as Agreement States, the Department of Energy, and industry groups.

4. Ability to modify regulatory processes to meet changing external demands

The NRC uses its planning, budgeting, and performance management process to integrate the agency's regulatory processes and ensure that the agency is able to respond to changes in its environment. Each year, the Program Review Committee holds planning sessions to ensure that the Commission's regulatory processes are integrated and resources allocated where needed. The Commission approves the Program Review Committee's plans during the budget process. In addition, the Executive Director for Operations holds meetings to ensure agencywide integration.

The NRC issues regulations considered necessary to ensure that licensees operate their reactor facilities in a safe manner and that the agency meets its strategic goal to protect the public health and safety. Any rule imposing requirements needs a backfit analysis (in accordance with the backfit rule set forth in 10 CFR 50.109) to demonstrate that the requirements either are necessary for adequate protection or are cost-beneficial safety enhancements. The completed regulatory actions reflecting this position during FY 2004 included the rulemaking on performance-based risk-informed fire protection and the risk-informed 50.44 Rulemaking.

Quarterly meetings of the Probabilistic Risk Assessment Steering Committee ensure that risk-informed activities are integrated agencywide. Similarly, the agencywide participation of NRC managers on the Research Effectiveness Review Board ensures that the agency's research program effectively meets agencywide needs.

The NRC's Risk Steering Committee provides guidance and sets expectations for implementing risk-informed initiatives in the Nuclear Materials and Waste Safety programs. This committee is comprised of agency experts who offer guidance in risk-informing initiatives. These experts also provide peer review of risk-informed products.

The NRC and representatives of the Nuclear Energy Institute hold periodic Fire Protection Issues Management Meetings. These meetings provide a forum through which the NRC and the industry can identify and prioritize emerging fire protection issue and develop resolutions.

The NRC's Rulemaking Coordinating Committee, established in 1998, ensures that the agency's rulemaking process is consistent agencywide. The primary focus of the Rulemaking Coordinating Committee is to ensure consistency in the methods used to develop and promulgate rules and to facilitate initiatives for improving the rulemaking process.

The staff continued to prepare for receipt of the Department of Energy's anticipated high-level waste repository license application and the associated hearings. This cooperative effort involves putting the systems and processes in place needed to meet the 3-year deadline.

5. Implementation of information resources

The NRC's actions to address this management challenge in FY 2005 are discussed in detail in the section of Chapter 2 on the President's Management Agenda. Please read the discussion of Expanded Electronic Government under the Federal Information Security Management Act.

6. Administration of all aspects of financial management

The NRC's actions to address this management challenge in FY 2005 are discussed in detail in the section of Chapter 2 on the President's Management Agenda. Please read the discussion of Improved Financial Management.

7. Communication with external stakeholders throughout NRC regulatory activities

The NRC issued guidelines for effectively communicating risk-related information to external stakeholders ("Effective Risk Communications," NUREG/BR-0308, dated January 2004). The document provides easy-to-use guidance for agency staff and management on NRC-specific communication topics and situations that deal with risk to ensure the agency's openness with the public. The guidance contains practical suggestions, tailored to the NRC's needs, that reflect the risk communication best practices learned from researchers, trainers, and practitioners from numerous Federal, State, private, and educational organizations.

Nuclear Reactor Safety

The NRC developed and implemented an array of plans for communications on the recent events at the Davis-Besse Nuclear Power Station and the Vermont Yankee Generating Station, fire protection, and Generic Safety Issue 191, "Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance."

In FY 2005, the NRC's license renewal program staff conducted 26 public meetings on the NRC's license renewal application review process and environmental issues. As of June 2005, the NRC had conducted an additional 17 license renewal public meetings. These meetings afforded the NRC the opportunity to solicit stakeholder comments. The meeting also allowed a meaningful exchange of information with external stakeholders on the safety and environmental effects of continued operation, the license renewal process, and opportunities for public involvement. The NRC held these meetings in the vicinity of those affected by the actions to be discussed.

In FY 2005, the NRC staff has held five public outreach meetings on the reactor vessel head degradation at the Davis-Besse Nuclear Power Station and the NRC's related response and evaluation. These meetings informed external stakeholders about the NRC's oversight activities and the Davis-Besse restart activities, and also gave citizens the opportunity to comment and ask questions.

The NRC also held a public meeting near the Vermont Yankee Nuclear Generating Station to discuss the NRC's power uprate review process and to obtain feedback from the public. The NRC also held public meetings near each nuclear power plant during FY 2004 to discuss the NRC's annual assessment of each plant's safety performance. These meetings gave external stakeholders information on each plant's safety performance and the NRC's role in ensuring safe operation.

In September and October 2003, the NRC received three early site permit applications for the Clinton, North Anna, and Grand Gulf sites. In FY 2004, the NRC held three scheduled public meetings to inform the respective communities of the NRC's regulatory role and the process for evaluating early site permit applications. In FY 2005, the NRC staff issued the draft safety evaluation report and draft environmental impact statement for all three applications. In June 2005, the staff issued the final safety evaluation report for the North Anna site, and the staff is scheduled to issue the two final safety evaluation reports in FY 2006. The staff is reviewing comments on the three draft environmental impact statements and is scheduled to issue the three final environmental impact statements in FY 2006.

Nuclear Materials and Waste Safety

During FY 2005, the NRC coordinated with the Department of Energy on several projects including the mixed-oxide fuel fabrication facility, and issues related to gas centrifuge uranium enrichment (e.g., the development of a memorandum of understanding on oversight of the U.S. Enrichment Corporation, Inc.) gas centrifuge facility.

During FY 2005, the NRC's Fuel Cycle Facilities Licensing and Inspection program staff has conducted 12 public meetings on significant regulatory issues. These meetings allowed the NRC to solicit stakeholder viewpoints and stakeholders to exchange information on issues such as the gas centrifuge facility licensing initiative and licensee performance reviews. Most of these meetings took place near the people affected by the actions.

In March 2005, the NRC issued a final rule to amend the agency's requirements for training and experience, as set forth in 10 CFR Part 35, "Medical Use of Byproduct Material." The staff also revised the guidance document "NUREG-1556, Volume 9, Consolidated Guidance About Materials Licenses, Program-Specific Guidance About Medical Use Licenses," to conform to the amended training and experience requirements. The NRC staff developed the rule with input from professional speciality boards and other members of the public and from the NRC's Advisory Committee on the Medical Uses of Isotopes. The staff also worked closely with the States to ensure a cooperative dialogue about the regulation of radioactive material. In addition, the NRC staff participated in the NRC's Advisory Committee on the Medical Uses of Isotopes meetings in October 2004 and April 2005 and the Conference of Radiation Control Program Directors meeting in April 2005.

The NRC staff has a generic communication plan for rulemakings. The primary goal of this plan is to ensure that the NRC conveys a consistent message to all internal and external stakeholders. The NRC also maintains a public Web site to communicate with stakeholders. This site provides links to pertinent documents, updates on current activities, and information on opportunities for stakeholder input.

During FY 2005, NRC continued its public outreach efforts for the proposed high-level waste repository at Yucca Mountain. NRC representatives also provided an overview of the agency's role in the potential licensing of the repository at several public outreach meetings in Nevada. The staff held a meeting with members of the public in Pahrump, Nevada, to discuss the Yucca Mountain project and a presentation to the National Conference of State Legislatures High-Level Waste Working Group.

Through May 2005, the NRC participated in 25 workshops, conferences, and town hall meetings with representatives of various Federal, State, and local agencies, international bodies, the nuclear industry; and public interest groups focused on spent fuel storage and transportation issues. The NRC conducted public meetings to seek input to inform national positions prior to significant meetings of the International Atomic Energy Agency concerning international transport regulations. The NRC updated and continued to implement the communications plan for spent fuel transportation, which provides a focused approach for public outreach and communication. The Spent Fuel Storage and Transportation program conducted a Licensing Process Workshop in February 2005 to: (1) introduce revised guidance for interaction with 10 CFR Part 71 and Part 72 applications ("rules of engagement") (2) discuss lessons learned and experience based on past practices (3) revise the interim staff guidance process to solicit stakeholder, public, and industry comments; and (4) solicit feedback and suggestions from applicants, stakeholders, industry, members of the press and other media, and members of the public on licensing process improvements. The Workshop addressed the agency's strategic goals of Openness, and Effectiveness in the agency's regulatory processes.

During FY 2005, NRC staff continued to participate in meetings of all five regional State groups on radioactive material transportation issues (i.e., the Southern States Energy Board, the Council of Governments Northeast High-Level Radioactive Waste Transportation Task Force, the Midwestern Radioactive Materials Transportation Committee, the Western Interstate Energy Board, and the Western Governors Association). The staff also participated in meetings held by the National Conference of State Legislatures' High-Level Radioactive Waste Working Group. NRC participation at these meetings helped to inform State public health and safety agency officials, as well as interested State legislative representatives. The meetings also allowed NRC staff to provide information to State-level representatives to address constituent safety concerns on transportation, to inform local and state transportation decisions, and served as an useful conduit for States to express concerns and seek information from the NRC.

The NRC conducted several public meetings with interested stakeholders on various sites or projects undergoing environmental review or scoping processes, including controlling the disposition of solid materials.

The NRC held numerous technical meetings with licensees to discuss issues associated with the decommissioning of their sites. These meetings were noticed in accordance with NRC requirements and guidance and were open to observation by members of the public. Meetings were held for the Westinghouse-Hematite, FMRI, Inc., Kerr-McGee-Cushing Cimarron, and Mallinkrodt material sites and for the Maine Yankee, Humbolt Bay, and Rancho Seco power reactor sites. In addition, NRC revised

and enhanced the NRC's decommissioning Web page, published a brochure on the decommissioning process, and published the annual decommissioning report as a NUREG report.

The NRC maintains a public Web site to communicate with stakeholders. This site provides various links to pertinent documents, updates on current activities, and information on opportunities for stakeholder input. In FY 2005, the staff continued to add to the site semiannual reports on the rulemaking for controlling the disposition of solid material.

8. Intragency communication (up, down, and across organizational lines)

The NRC staff routinely prepares communications plans on important topics. NRC prepares talking points and briefing papers on major activities to ensure consistency in key messages. The agency has also emphasized efficient meeting policies, promoted team building, and supported intra-office efforts to share important information agencywide.

The NRC continues to update and improve methods for meeting employees' information needs. Announcements have been streamlined. The offices will continue developing and updating their own individual Web pages linked to the agency's internal home page.

The NRC has established a Communications Council to coordinate and implement the agency's internal communication strategies and share best practices.

Internal NRC communications have increased, and a growing number of offices periodically issue internal electronic newsletters. The agency issues "EDO updates" in which the Executive Director for Operations regularly communicates important information to all agency staff, and the agency frequently issues memoranda to the staff on a variety of subjects. In addition, several individual offices have undergone detailed internal communication studies. These activities have included administering surveys, holding focus groups, and creating methods for collecting internal feedback.

The NRC regularly emphasizes good communication practices by agency managers. These practices include face-to-face communications, frequent feedback, and two-way communication. New leadership courses will also emphasize these practices and stress coaching and team building. In addition, many offices have created their own communication-related positions or teams address stakeholder concerns, promote good internal and external communication practices, and to address policy matters.

APPENDIXES AND ENDNOTES APPENDIX B

The NRC is reinforcing the agency's safety mission through e-mail messages, messages on the internal Web page, posters, memoranda, and other media. The agency is asking managers to emphasize that all performance measures support the safety goal because they allow the NRC and its licensees to focus on activities that are most important to safety. Agency managers will reinforce the linkage between the NRC's daily activities and the agency's safety mission.

In FY 2005, the offices involved in the Nuclear Reactor Safety program met periodically with intra-agency stakeholders to enhance communication and support functions. Offices responsible for this program also identified internal stakeholders as a target audience in their communications plans.

In addition, the Office of Nuclear Reactor Regulation developed a communications program for nuclear reactor regulation to support achievement of the agency's mission by providing tools, processes, and guidance to improve internal and external communication. The office has proposed and developed new and expanded communication efforts to encourage internal sharing of ideas, improve the flow of information to staff and management, and improve the timeliness, accuracy, and clarity of internal and external communications.

During FY 2005, the NRC continued to improve the communications among offices through periodic meetings. Communication between headquarters and regional offices continued to improve as a result of frequent conference calls at the staff and senior management levels, semiannual headquarters/regions counterpart meetings, trips, weekly informational e-mail messages, and the internal Web pages. The offices also continued to rotate staff and management assignments throughout the organization as a team building measure.

Communication between the Office of Nuclear Reactor Regulation and the agency's other program and support offices is improving as a result of the office's comprehensive communications program and agencywide support for the monthly Communication Council meetings. These meetings encourage sharing of best practices and lessons learned that apply agencywide. In addition, routine interactions with the NRC's Director of Communications assist the staff in defining, implementing, and continually improving communications.

The communication-related efforts undertaken by the Office of Nuclear Materials Safety and Safeguards include continuation of an active program for inter- and intraoffice rotational assignments, semiannual meetings with the Office of Nuclear Regulatory Research to review the status of ongoing research projects, monthly Decommissioning Management Board meetings to discuss decommissioning program activities, semiannual

headquarters/regional counterpart meetings to discuss programmatic and technical issues in a focused, structured manner, and biweekly conference calls with the Regions and other internal stakeholders.

In February 2005, the Office of Nuclear Materials Safety and Safeguards conducted an independent spent fuel storage installation inspector counterpart meeting with inspectors and managers from headquarters and all the NRC regional offices. This meeting gave these NRC inspectors an opportunity to share experience, and discuss programmatic issues and challenges.

9. Managing Human Capital

The NRC's actions to address this management challenge in FY 2005 are discussed in detail in the section of Chapter 2 on to the *President's Management Agenda*. See the discussion on "Strategic Management of Human Capital."

MANAGEMENT DECISIONS AND FINAL ACTIONS ON OIG AUDIT RECOMMENDATIONS

The agency has established and continues to maintain an excellent record in resolving and implementing audit recommendations presented in Office of the Inspector General reports. Section 5(b) of the Inspector General Act of 1978, as amended, requires agencies to report on final actions taken on Office of the Inspector General audit recommendations. The following table gives the dollar value of disallowed costs determined through contract audits conducted by the Defense Contract Audit Agency and NRC's Office of the Inspector General. Because of the sensitivity of contractual negotiations, details of these contract audits are not furnished as part of this report. As of September 30, 2005, there were no outstanding audits recommending that funds be put to better use.

MANAGEMENT REPORT ON OFFICE OF THE INSPECTOR GENERAL AUDITS WITH DISALLOWED COSTS For the period October 1, 2004-September 30, 2005								
Category			No. of Audit Reports	Questioned Costs	Unsupported Costs			
1.	decis not b	t reports with management ions on which final action had een taken at the beginning of this ting period.	0	0	0			
2.		t reports on which management ions were made during this d.	2	\$42,079	0			
3.		t reports on which final action aken during this report period.						
	(i)	Disallowed costs that were recovered by management through collection, offset, property in lieu of cash, or otherwise.	2	\$42,079	0			
	(ii)	Disallowed costs that were written off by management.	0	0	0			
4.	Reports for which no final action had been taken by the end of the reporting period.		0	0	0			

MANAGEMENT DECISIONS NOT IMPLEMENTED WITHIN ONE YEAR

Management decisions were made before October 1, 2004, for the Office of the Inspector General audit reports discussed in the following paragraphs. As of September 30, 2005, NRC did not take final action on some issues.

NRC's License Fee Development Process Needs Improvement (OIG/99A-01)

December 14, 1999

The Office of the Inspector General recommended that the methodology for calculating the hourly rates for license fees be reevaluated to include the full-cost concept as embodied in Office of Management and Budget Circular No. A-25, User Charges, and Statement of Federal Financial Accounting Standards No. 4, Managerial Cost Accounting Standards, and that actual cost data are used to refine future rate calculations. The NRC implemented a cost accounting system in FY 2002, and cost data from this system was used as input to review the existing full-cost rate, including identification and assignment of direct and allocated indirect costs. In November 2003, NRC obtained contractor assistance to provide recommendations for improving NRC's license fee development process, including through the use of actual cost data to refine hourly rate calculations. Based on analysis of the contractor's recommendations, NRC developed procedures to calculate 10 CFR Part 170 hourly rates using actual cost data from the cost accounting system. The procedures have been piloted by using FY 2004 cost data to develop FY 2005 hourly rates. The NRC plans to use the procedures to calculate hourly rates each year, and to use those rates to recover the costs of activities under 10 CFR Part 170, beginning with the FY 2006 fee rule.

Review of Audit Follow-up System (OIG-00-A-05)

August 14, 2000

The Office of the Inspector General recommended that NRC revise the Management Directive and Handbook 6.1, *Resolution and Follow-up of Audit Recommendations*, governing resolution and follow-up of audits to reflect periodic scheduling standards for conducting analyses of audit recommendations to determine possible trends and system-wide problems and solutions, as required by Office of Management and Budget Circular A-50.

In addition, the Office of the Inspector General recommended that NRC assess its scheduling requirements for conducting audit follow-up reviews with the objective of conducting them on a consistent frequency. The NRC developed revisions of the management directive and handbook to incorporate these recommendations, as well as other changes, and the revisions are pending the Chairman's approval for issuance. The management directive and handbook were also revised to address the recommendations of OIG-00-E-09 as discussed in the paragraph in this section entitled "Special Evaluation of the Role and Structure of NRC's Executive Council (OIG-00-E-09)." Issuance of the revised management directive and handbook, which is expected by early 2006, will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Special Evaluation of the Role and Structure of NRC's Executive Council (OIG-00-E-09)

August 31, 2000

The Office of the Inspector General recommended that NRC's management directives and communication mechanisms be updated to reflect the responsibilities and alignment of the Executive Director for Operations, the Chief Financial Officer, and the Chief Information Officer after the Commission decided on a management strategy for NRC's Executive Council. In January 2001, the Commission announced the abolishment of the Executive Council, although the Executive Director for Operations, Chief Financial Officer, and Chief Information Officer continue to meet periodically to ensure necessary communications. Of the 32 management directives reviewed for possible revision to reflect the elimination of the Executive Council and the realignment of the responsibilities of the Executive Director for Operations, Chief Financial Officer, and Chief Information Officer, issuance of two remains to be completed. One management directive is awaiting the Chairman's approval for issuance, as discussed in the paragraph in this section entitled "Review of Audit Follow-up System (OIG-00-A-05)." The other management directive is part of the management directive consolidation effort discussed in the paragraph in this section entitled "Review of the Agencywide Documents Access and Management System (OIG-02-A-12)." Issuance of these two remaining management directives, which is expected in March 2006, will complete agency actions on the OIG's recommendations from this audit.

Review of NRC's Quality Assurance Process for Official Documents (OIG-01-A-02)

February 23, 2001

The Office of the Inspector General recommended that NRC improve its quality assurance process for official documents by revising Management Directive and Handbook 3.57, *Correspondence Management*, to provide clear expectations for NRC staff to heighten awareness of the importance of information accuracy. Specifically, the Office of the Inspector General recommended that NRC establish the responsibilities of the document originator and concurrence chain reviewers with regard to accuracy of final products and to set expectations for document originators concerning fact-checking methods. Interim policy guidance on ensuring the technical accuracy and readability of NRC's documents and correspondence was issued to all NRC employees in May 2001. The revised management directive and handbook incorporating this policy and other needed updates are being finalized and are expected to be approved by the Executive Director for Operations for issuance in early FY 2006, which will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Government Performance and Results Act: Review of the FY 1999 Performance Report (OIG-01-A-03)

February 23, 2001

The Office of the Inspector General recommended that NRC develop the management control procedures needed to produce valid and reliable performance data, including guidance on reporting unmet goals. Interim guidance for performance management and reporting performance information was issued in July 2001. In July 2002, a new Management Directive and Handbook 4.8, *Performance Measurements*, was issued for intra-agency review and comment. It was subsequently decided that performance measurement should be addressed in the broader context of budget and performance integration. Therefore, Management Directive 4.8 is being incorporated into a revised Management Directive and Handbook 4.7, *Planning, Budgeting, and Performance Management*. The revised Management Directive 4.7 will clarify roles and responsibilities in setting the agency's strategic direction, determining planned activities and resources, measuring and monitoring performance, and assessing performance. The revised Management Directive and Handbook 4.7 are scheduled to be issued for intra-agency

review and comment in FY 2006. Issuance of this management directive and handbook will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Review of the Agencywide Documents Access and Management System (OIG-02-A-12)

June 12, 2002

The Office of the Inspector General recommended that NRC finalize and issue its draft new management directive and handbook addressing the agency's systems development life-cycle management (SDLCM) methodology. In early FY 2003, NRC conducted a lessons-learned analysis to identify changes to improve the SDLCM methodology's effectiveness and usability. Feedback from this analysis resulted in major process revisions, which were documented in a draft new Management Directive 2.5, *Application Systems Life-Cycle Methodology*, and a draft new Handbook 2.5, *Systems Development and Life-Cycle Management Methodology*, which were expected to be issued by November 2004.

To address numerous comments on draft Management Directive and Handbook 2.5 from users, it has been consolidated with two existing management directives and associated handbooks–Management Directive and Handbook 2.1, *Information Technology Architecture*, and Management Directive and Handbook 2.2, *Capital Planning and Investment Control*. The result is a new draft directive, Management Directive 2.8, *Project Management Methodology*, which is accompanied by a Web-based manual. Pending intra-agency review and comment, the drafts are available on the internal NRC Web site. Issuance of Management Directive 2.8 and its manual are expected in March 2006 and will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Review of Security at NRC Headquarters (OIG-02-A-14)

August 15, 2002

Due to the sensitive nature of the Office of the Inspector General's review and recommendations in this area, specific details are not furnished as part of this report. Completion of open recommendations has been delayed due to an increase in scope, including the acquisition of an adjacent lot as the primary entry and exit path to the NRC headquarters office complex, and due to the approvals required to make changes to the perimeter of the complex. Completion of agency actions on recommendations remaining

open as of September 30, 2005, are expected to be completed by the end of 2005, which will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Independent Evaluation of NRC's Information Security Program as Required by the Government Information Security Reform Act for FY 2002 (OIG-02-A-17)

September 11, 2002

Due to the sensitive nature of the Office of the Inspector General's review and recommendations in this area, specific details are not furnished as part of this report. As of September 30, 2005, completion of agency actions on this audit report requires the issuance of a new NRC management directive and its associated Web-based manual, which are discussed further in the paragraph in this section entitled "Review of the Agencywide Documents Access and Management System (OIG-02-A-12)." This agency action will be carried over to and tracked to completion via NRC's FY 2006 Plan of Action and Milestones required by the Federal Information Security Management Act.

Review of NRC's Handling and Marking of Sensitive Unclassified Information (OIG-03-A-01)

October 25, 2002

The Office of the Inspector General recommended that NRC revise the management directive and handbook governing the sensitive, unclassified information security program and mandate consistent use of markings. During FY 2004, the Executive Director for Operations sponsored an interoffice task force review of all internally and externally generated categories of sensitive, unclassified information, with the exception of safeguards information. The review focused on identifying where clarification may be appropriate in the requirements for marking, storage, access, transmission, reproduction, record keeping, and destruction of such information. The task force report and recommendations have been finalized and are being implemented. Implementation includes developing a revision of Management Directive and Handbook 12.6, NRC Sensitive Unclassified Information Security Program, which currently includes NRC policy and guidance for all types of sensitive unclassified information, including safeguards information.

The revised management directive and handbook will cover only sensitive unclassified non-safeguards information, and will simplify marking and other handling requirements. A new management directive and handbook will be issued to address safeguards information. The revised sensitive unclassified non-safeguards information management directive and handbook are expected to be issued in FY 2007. The new safeguards information management directive and handbook are expected to be issued in FY 2006. Until they are available, the new NRC policy for handling, marking, and protecting sensitive unclassified non-safeguards information is available on the internal Web site. Issuance of these revised documents will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Use of Electronic Mail at NRC (OIG-03-A-11)

March 21, 2003

The Office of the Inspector General recommended that NRC revise Management Directive and Handbook 3.53, NRC Records Management Program, to include current information about the Agencywide Documents Access and Management System (ADAMS). NRC continues to work to consolidate Management Directive and Handbook 3.53, NRC Records Management Program, and Management Directive and Handbook 3.50, Document Management, and plans to issue one directive, to be entitled NRC Records and Document Management Program. This directive will have a two-part handbook, Part I of which will cover the NRC records management program, and Part II will address ADAMS document processing. As of the end of FY 2005, the draft was circulating for intra-agency review and comment, and the final is expected to be issued in FY 2006. Issuance of the revised management directive and handbook will complete agency actions on the recommendations from this audit.

NRC's Accountability for Special Nuclear Materials (OIG-03-A-15)

June 3, 2003

The Office of the Inspector General recommended several changes to strengthen NRC's oversight program for ensuring that licensees appropriately control and account for special nuclear material (SNM). The open recommendations, the agency actions required to address these recommendations, and projected completion dates for agency actions are as follows:

- (1) The Office of the Inspector General recommended that NRC conduct periodic inspections to verify that material licensees comply with material control and accounting (MC&A) requirements, including but not limited to visual inspections of licensees' SNM inventories and validation of report information. A comprehensive MC&A program review was undertaken by the NRC during 2004. Based on the results of this review and further staff analysis, in August 2005 the staff provided the Commission recommendations for MC&A program changes, which are still under consideration. Following receipt of the Commission's guidance, the staff will begin to implement any inspection program recommendations endorsed by the Commission. If the recommendations are endorsed by the Commission, NRC actions to address this recommendation may not be completed until FY 2007. In the interim, inspections of selected licensee responses to NRC Bulletin 2003-04 regarding inventories of source material and SNM tracked in the Nuclear Materials Management and Safeguards System (NMMSS) are being conducted in accordance with a temporary inspection instruction.
- (2) The Office of the Inspector General recommended that NRC staff report annually to the Commission on the effectiveness of NRC's inspection program for ensuring that licensees satisfactorily carry out their MC&A responsibilities. Performance measures were drafted and incorporated into the FY 2005 operating plan. Performance was evaluated monthly and quarterly during FY 2005, and MC&A inspection program highlights of interest were provided to the Commission during an annual program review briefing which was held in the second quarter of FY 2005. These activities will be continued until agreement is reached with the Office of the Inspector General that these NRC actions sufficiently address this recommendation.
- (3) The Office of the Inspector General recommended that NRC document the basis of the approach used to risk-inform NRC's oversight of MC&A activities for all types of materials licensees. A comprehensive MC&A program review was undertaken by the NRC during 2004. Based on the results of this review and further staff analysis, in August 2005 the staff provided the Commission recommendations for MC&A program changes, which are still under consideration. Following receipt of the Commission's guidance, the staff will begin to implement any MC&A oversight recommendations endorsed by the Commission, and will document the bases for any changes, including justification for recommendations that are risk-informed. If the recommendations are endorsed by the Commission, NRC actions to address this recommendation may not be completed until FY 2007.

- (4) The Office of the Inspector General recommended that NRC revise its regulations to require licensees authorized to possess SNM, and not currently required to do so, to conduct annual inventories and submit an annual Material Status Report or Physical Inventory Summary Report to NRC. A comprehensive MC&A program review was undertaken by the NRC during 2004. Based on the results of this review and further staff analysis, in August 2005 the staff provided the Commission recommendations for MC&A program changes, which are still under consideration. Following receipt of the Commission's guidance, the staff will begin to implement any rulemaking recommendations endorsed by the Commission. NRC actions to address this recommendation may not be completed until FY 2007.
- (5) The Office of the Inspector General recommended that NRC establish an independent system of accounting for SNM possessed by NRC and Agreement State licensees, and ensure that beginning balances are accurate based on NRC's physical verification of a statistical sample of the location and amounts of SNM held by the licensees, a review of a statistical sample of a licensee's records, or some combination thereof. Once this has been done, OIG has also recommended that NRC redirect its funding for NMMSS to the NRC licensee database, dissolve the current Department of Energy -NRC programmatic agreement for development and operation of NMMSS, and institute a new agreement relative to providing the Department of Energy with the information necessary to satisfy international SNM reporting obligations.

In lieu of abandoning NMMSS—to replace it with a new, independent NRC system of accounting for SNM—and the contractual relationship with the Department of Energy to maintain it, NRC is systematically addressing contributing causes of the concerns regarding the adequacy and integrity of the current NMMSS database. The NRC's activities in this regard include the NMMSS Rebaselining Project to facilitate the confirmation of licensee SNM holdings, direct NRC oversight of the NMMSS contractor's activities, and periodic coordination meetings with DOE to improve the effectiveness and efficiency of NMMSS operations and the NMMSS contractor's performance, among other efforts.

In May 2005, the staff provided recommendations to the Commission, including possible rulemaking changes that would enhance NMMSS accuracy for SNM. The Commission directed the staff to develop a rulemaking to incorporate the staff's recommendations, which was initiated in September 2005. Issuance of the final rule, which is expected in early 2008, will complete NRC actions to

- address this OIG recommendation. In the interim, the staff will continue its activities with DOE directed toward improving the availability and reliability of information in the NMMSS database. Additionally, the staff has completed a revision of Inspection Manual Chapter 2800, Material Inspection Program, and associated procedures to provide for confirmation of SNM inventories of reportable nuclear materials at licensee sites.
- (6) The Office of the Inspector General recommended that for any NRC funding to the Department of Energy directed toward meeting international reporting obligations, NRC should pursue all remedies available under agency policies and procedures for placement of and monitoring work with the Department of Energy. The NRC has pursued various actions with the Department of Energy to address the NMMSS contractor's performance issues. Closure of this recommendation requires confirmation that NRC is exercising all options available to encourage the Department of Energy 's compliance in submitting timely, monthly letter status reports as required by contract. It is expected that the Office of the Inspector General will complete its review of NRC's actions in early FY 2006.

Completion of the activities described above will complete agency actions on the Office of the Inspector General's recommendations from this audit.

Independent Evaluation of NRC's Implementation of the Federal Information Security Management Act for FY 2003 (OIG-03-A-22)

September 15, 2003

Due to the sensitive nature of the Office of the Inspector General's review and recommendations in this area, specific details are not furnished as part of this report. As of September 30, 2005, completion of agency actions on this audit report requires certification and accreditation of some systems and completion of contingency plan testing and documentation of findings and recommendations identified during the testing. These activities are expected to be completed by early 2006. These agency actions will be carried over to and tracked to completion via NRC's FY 2006 Plan of Action and Milestones required by the Federal Information Security Management Act.

Audit of the NRC's FY 2003 Financial Statements (OIG-04-A-03)

December 17, 2003

The Office of the Inspector General observed that NRC does not have a routine, timely, and disciplined process in place to monitor the adequacy of accounting information necessary to capitalize internal use software projects, and recommended that the Chief Financial Officer reassess the accounting activities being undertaken by agency personnel to ensure the completeness and propriety of accounting transactions. The Office of the Inspector General also recommended that the Chief Financial Officer be more proactive in monitoring and training project managers to instill discipline, thereby providing reliability of financial information.

In July 2004, the Chief Financial Officer issued revised procedures for monitoring approved software development projects to provide for more proactive monitoring and training of project managers and monitoring of accounting activities. During FY 2005, the Chief Financial Officer reassessed existing policies and procedures to improve the completeness and propriety of internal use software capitalization information. In addition, the Chief Financial Officer undertook a number of actions to educate NRC employees involved in software development projects about NRC's policies and procedures and their individual responsibilities and to ensure alignment of other agency directives with these policies and procedures. Closure of this recommendation and completion of agency actions on the recommendations from this audit requires Office of the Inspector General confirmation that NRC's actions have been sufficient. It is expected that the Office of the Inspector General will complete its review during its audit of NRC's FY 2005 financial statements.

Audit of NRC's Protection of Safeguards Information (OIG-04-A-04)

January 8, 2004

The Office of the Inspector General recommended that NRC finalize and issue the designation guidance document pertaining to an NRC category of sensitive unclassified information referred to as safeguards information and which was under development. The guide was completed on September 30, 2005, and was approved for issuance as an

NUREG. The NUREG will be published and made publically available before the end of 2005. The issuance of this NUREG will complete agency actions on the recommendations from this audit.

Review of NRC's Personnel Security Program (OIG-04-A-11)

March 25, 2004

The Office of the Inspector General recommended that in order to improve the likelihood that security clearances for summer interns are granted prior to or during their summer employment period, NRC should begin the hiring process for these interns one month earlier each year and should impose a deadline on them for returning their completed security package. The Office of the Inspector General also recommended that in accordance with Office of Personnel Management policy, NRC should inform the Office of Personnel Management when an intern terminates employment prior to completion of the Office of Personnel Management background investigation so that the investigation can be canceled.

The Office of Personnel Management has greatly improved on the lead time for processing security clearance investigations since this audit report was issued. In addition, the NRC is now using e-QIP (Electronic Questionnaires for Investigations Processing), which is an Internet-accessible tool for inputting and processing security questionnaire information that provides additional process efficiencies. Further, the Office of Personnel Management has agreed that ongoing investigations do not need to be terminated when a summer intern finishes their summer employment if the intern is expected to be re-employed at a later date. At the beginning of each fiscal year, the Office of Human Resources sends a request to NRC office directors asking them to initiate the hiring of summer interns. Beginning in FY 2006, this request will ask the office directors to identify interns from the previous summer who are not expected to return so that the Office of Personnel Management may be advised to terminate the investigations, if not yet completed, for these individuals. The request will also set an end-of-March deadline for submission of completed security packages by the interns. Closure of these recommendations and completion of agency actions on the recommendations from this audit requires the agency to provide confirmation to the Office of the Inspector General that the Office of Personnel Management has agreed to this approach.

Review of NRC's Reactor Operating Experience Task Force Report (OIG-04-A-13)

March 30, 2004

The Office of the Inspector General recommended that NRC revise its reactor operating experience program objectives to include measurable performance aspects, and establish an independent operating experience function and locate that function at the appropriate organizational level.

To incorporate measurable performance aspects into the program objectives, the NRC has expanded each program objective to include its supporting description and the attributes recommended in the Reactor Operating Experience Task Force report. This information has been incorporated into a new draft Management Directive and Handbook 8.7, Reactor Operating Experience Program, which was issued for interim use in December 2004. After the NRC staff has worked with the draft management directive and handbook for one year to receive feedback and identify if adjustments are needed, it will be finalized. It is expected that it will be ready for issuance in March 2006. In May 2005, a draft revised procedure was issued to describe in more detail the requirements, roles, and responsibilities of the Office of Nuclear Reactor Regulation as the designated lead for the NRC's reactor operating experience program. It is expected that the Office of Nuclear Reactor Regulation staff will use the draft revised procedure for about a year so that changes needed to improve the program and/or the process can be incorporated before it is issued in final form, which is expected to occur in mid-FY 2006. The NRC considers that the implementation of the organization responsibilities described in new draft Management Directive and Handbook 8.7 and in the revised Office of Nuclear Reactor Regulation procedure provides an appropriate interdependent organizational model for the reactor operating experience program, which when combined with the measurable performance aspects, sufficiently addresses Office of the Inspector General's recommendations. Issuance of the final management directive and handbook and final procedure will complete agency actions on the recommendations from this audit.

NRC's Implementation of Regulations Concerning Nondiscrimination Based on Handicap (OIG-04-A-14)

May 24, 2004

The Office of the Inspector General recommended that NRC revise Management Directive and Handbook 11.6, *Financial Assistance Program*, to identify and define the Office of Small Business and Civil Rights' role in accordance with 10 CFR Part 4, Subpart B, "Regulations Implementing Section 504 of the Rehabilitation Act of 1973, as Amended." The revised management directive and handbook are undergoing final review for approval, and are expected to be issued by the end of 2005, which will complete agency actions on the recommendations from this audit.

Review of NRC's Drug-Free Workplace Plan (OIG-04-A-15)

May 24, 2004

The Office of the Inspector General recommended that NRC revise the *NRC Drug-Free Workplace Plan* to include the clause on deferral of testing from the U.S. Department of Health and Human Services, *Model Plan for a Comprehensive Drug-Free Workplace Program,* which would allow drug testing of employees who were absent on the day of the drug test for up to 60 days after the test date. The Office of the Inspector General also recommended that NRC include instructions in the NRC plan that revisions must receive approval from Health and Human Services prior to implementation and obtain Health and Human Services approval of the 2004 version of the NRC plan prior to implementation.

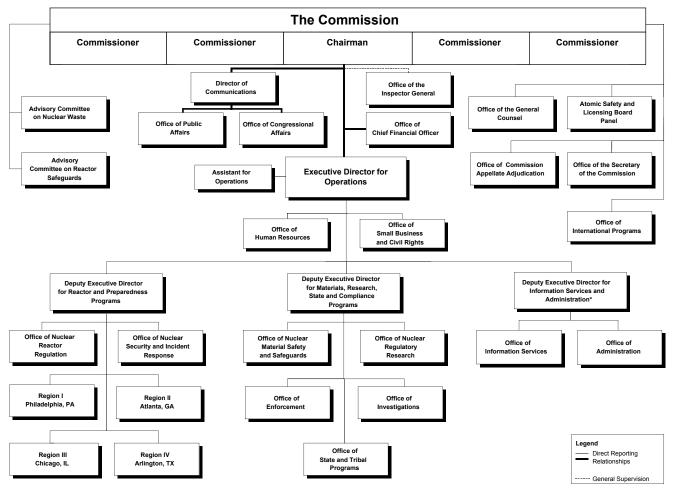
The latest version of Revision 2 of the NRC plan, which was forwarded to Health and Human Services for review and approval on August 12, 2005, includes the deferral of testing clause and the instructions that revisions of the plan must receive approval from the Department of Health and Human Services prior to implementation. The Department of Health and Human Services provided comments on this version to NRC in early September 2005, and discussions are under way with Health and Human Services to ensure NRC's understanding of the comments. Another version of Revision 2 of the NRC plan, incorporating the Department of Health and Human Services 's latest comments, is expected to be provided to Health and Human Services for review and approval by the end of October 2005. The NRC will obtain Department of Health and Human Services approval prior to dissemination and implementation of Revision 2 of the NRC plan, which will complete agency actions on the recommendations from this audit.

AGREEMENT STATES



Alabama	Illinois	Massachusetts	North Carolina	Tennessee
Arkansas	Iowa	Mississippi	North Dakota	Texas
Arizona	Kansas	Nebraska	Ohio	Utah
California	Kentucky	Nevada	Oklahoma	Washington
Colorado	Louisiana	New Hampshire	Oregon	Wisconsin
Florida	Maine	New Mexico	Rhode Island	
Georgia	Maryland	New York	South Carolina	

NRC ORGANIZATION CHART AS OF SEPTEMBER 30, 2005



APPENDIX F

GLOSSARY OF ACRONYMS

ACRS Advisory Committee on Reactor Safeguards

ADAMS Agencywide Documents Access and Management System

AICPA American Institute of Certified Public Accountants

AID Aid for International Development

AO abnormal occurrence

ASP accident sequence precursor

CCR Central Contractor Registration

CE Combustion Engineering Owner's Group

CFO Chief Financial Officer

CFO Act Chief Financial Officers Act of 1990

CFR Code of Federal Regulations

CIO Chief Information Officer

CIOC CIO Council

COLs Combined Operating Licenses
CSRS Civil Service Retirement System

CY calendar year

DHS Department of Homeland Security

DOE Department of Energy
DOI Department of Interior
DOL Department of Labor

EDO Executive Director for Operations

EFT electronic funds transfer

E-Gov electronic Government

EPA Environment Protection Agency

E-QIP Electronic Questionnaires for Investigations Processing

ESP Early Site Permits

FACTS I Federal Agencies' Centralized Trial Balance System

FAR Federal Acquisition Regulation

FECA Federal Employees Compensation Act

FEMA Federal Emergency Management Agency
FERS Federal Employees Retirement System

FFMIA Federal Financial Management Improvement

FFS Federal Financial System

FICA Federal Insurance Compensation Act

FISMA Federal Information Security Management Act

FPPS Federal Personnel and Payroll System

FY fiscal year

GAO Government Accountability Office

GFE Generic Fundamentals Examination

GFRS Governmentwide Financial Reporting System

GPEA Government Paperwork Elimination Act

GSA General Services Administration

GSI General Safety Issue

HLW High-Level Waste

HSPD-12 Homeland Security Presidential Directive 12

IAEA International Atomic Energy Agency

IG Inspector General

APPENDIXES AND ENDNOTES

APPENDIX F

IMPEP Integrated Materials Performance Evaluation Program

Improvement Act Federal Management Improvement Act of 1996
Integrity Act Federal Managers' Financial Integrity Act of 1982

IOAA Independent Offices Appropriation Act
IPAC Intragovernment Payment and Collection

ISA integrated safety analysis
IT information technology

JFMIP Joint Financial Management Information Program

LSN Licensing Support Network

MC&A material control and accounting

MOX mixed-oxide fuel

MWe Megawatts electric

NARA National Archive and Records Administration

NBC National Business Center

NFPA National Fire Protection Association

NMED Nuclear Materials Event Database

NMMSS Nuclear Materials Management and Safeguards System

NMSS Office of Nuclear Materials Safety and Safeguards

NRC Nuclear Regulatory Commission

NRR Office of Nuclear Reactor Regulation

NSIR Office of Nuclear Security and Incident and Response

NUREG Nuclear Regulatory Commission Regulation

NWF Nuclear Waste Fund

OBRA-90 Omnibus Budget Reconciliation Act of 1990

OCFO Office of the Chief Financial Officer

OEDO Office of the Executive Director for Operations

OIG Office of the Inspector General
OIS Office of Information Services

OMB Office of Management and Budget
OPM Office of Personnel Management
OSART Operational Safety Review Team

PAR Performance and Accountability Report

PART Program Assessment Rating Tool

PBPM planning, budgeting, and performance management

PL Public Law

PMM Project Management Methodology

PRA Probabilistic risk assessment

PRB Petition Review Board

RASP Risk Assessment Standardization Project

RES Office of Nuclear Regulatory Research

RIRIP Risk-Informed Regulation Implementation Plan

RLO records liaison officer

RMG records management guideline

ROP reactor oversight process

SDLCM system development life-cycle management

SDLCMM system development life-cycle management methodology

SDP Significance Determination Process

SECY Office of the Secretary of the Commission

APPENDIXES AND ENDNOTES

APPENDIX F

SFFAS Statements of Federal Financial Accounting Standards

SFFAS Number 10 Accounting for Internal Use Software

SGI Safeguards Information
SNM special nuclear material

TI temporary instruction
TSP Thrift Savings Plan

- "Nuclear reactor accidents" are defined in the NRC Severe Accident Policy Statement as those events that result in substantial damage to the reactor fuel, whether or not serious offsite consequences occur.
- 2. This measure is the number of new red inspection findings during the fiscal year plus the number of new red performance indicators during the fiscal year. Programmatic issues at multi-unit sites that result in red findings for each individual unit are considered separate conditions for purposes of reporting for this measure. A red performance indicator and a red inspection finding that are due to an issue with the same underlying causes are also considered separate conditions for purposes of reporting for this measure. Red inspection findings are included in the fiscal year in which the final significance determination was made. Red performance indicators are included in the fiscal year in which Reactor Oversight Process external Web page was updated to show the red indicator.
- 3. Significant Accident Sequence Precursor (ASP) events have a conditional core damage probability (CCDP) or \triangle CDP of $\ge 1 \times 10^{-3}$. Such events have a 1/1000 (10⁻³) or greater probability of leading to a reactor accident involving core damage. An identical condition affecting more than one plant is counted as a single ASP event if a single accident initiator would have resulted in a single reactor accident. One event was identified in FY 2002 as having the potential of being a "significant" precursor. This precursor involved a reactor pressure vessel head degradation at Davis-Besse (see page 29 of last year's report). Preliminary Accident Sequence Precursor analysis shows Davis-Besse as a significant precursor. It will be final after the licensee comments. Based on the screening and engineering evaluation of FY 2002 and 2003 events, no other potentially "significant" precursors were identified. Therefore, the second performance measure was not exceeded for FY 2002 and 2003. For FY 2004 events occurring before June 1, 2004, screening and engineering evaluation of these events identified no potentially "significant" precursors.
- 4. This measure is the number of plants that have entered the Manual Chapter 0350 process, the multiple/repetitive degraded cornerstone column, or the unacceptable performance column during the fiscal year (i.e., were not in these columns or process the previous fiscal year). Data for this measure is obtained from the NRC external Web Action Matrix Summary page that provides a matrix

APPENDIXES AND ENDNOTES ENDNOTES

of the five columns with the plants listed within their applicable column and notes the plants in the Manual Chapter 0350 process. For reporting purposes, plants that are the subject of an approved deviation from the Action Matrix are included in the column or process in which they appear on the Web page.

- 5. Considering all indicators qualified for use in reporting.
- 6. Releases for which a 30-day report requirement under 10 CFR 20.2203(a)(3) is required.
- 7. With no event exceeding Abnormal Occurrence Criterion 1.B.1.
- 8. Performance targets have changed from FY 2000 to FY 2002 to reflect additional historical data. (Targets were as follows: FY 2000, 356; FY 2001, 350; FY 2002, 300; FY 2003, 300; and FY 2004, 300.)
- 9. Events of material entering the public domain in an uncontrolled manner are reported under 10 CFR 20.2201(a)(1)(i) and (ii). The NMED lists these events as reported by NRC licensees and, through the Agreement States, the Agreement State licensees. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources but primarily through licensee notifications. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports.
- 10. Performance targets have changed from FY 2000 to FY 2002 to reflect additional historical data. (Targets were as follows: FY 2000, 19; FY 2001, 40; FY 2002, 30; FY 2003, 30; and FY 2004, 30.)
- 11. Overexposures are those that exceed the dose limits specified in 10 CFR 20.2203(a)(2) as tracked in NMED. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with 10 CFR Part 70. Reportable chemical exposures are those that exceed license commitments. Such events would also include chemical exposures involving uranium recovery activities under the Uranium Mill Tailings Radiation Control Act. Multiple people may be affected by a single causal event. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also verifies the accuracy of the event reports.

- 12. Medical events (misadministrations), as reported under 10 CFR Part 35, are tracked in NMED. Multiple patients may be affected by a single causal event. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports.
- 13. This involves chemical releases from NRC-regulated activities under the Uranium Mill Tailings Radiation Control Act. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports. Releases that cause impacts to the environment that cannot be mitigated within applicable regulatory limits using reasonably available methods are not readily defined. The expert judgement of NRC personnel and that of other agencies, such as the Environmental Protection Agency, are relied upon to make that determination. Events of this magnitude would result in a prompt and thorough investigation.
- 14. Defined as a disclosure that harms national security or public safety.

AVAILABILITY OF REFERENCE MATERIALS IN NRC PUBLICATIONS

NRC Reference Material

As of November 1999, you may electronically access NUREG-series publications and other NRC records at NRC's Public Electronic Reading Room at http://www.nrc.gov/reading-rm.html.

Publicly released records include, to name a few, NUREG-series publications; Federal Register notices; applicant, licensee, and vendor documents and correspondence; NRC correspondence and internal memoranda; bulletins and information notices; inspection and investigative reports; licensee event reports; and Commission papers and their attachments.

NRC publications in the NUREG series, NRC regulations, and *Title 10, Energy*, in the Code of *Federal Regulations* may also be purchased from one of these two sources.

 The Superintendent of Documents U.S. Government Printing Office Mail Stop SSOP Washington, DC 20402–0001 Internet: bookstore.gpo.gov Telephone: 202-512-1800 Fax: 202-512-2250

 The National Technical Information Service Springfield, VA 22161–0002 www.ntis.gov

1-800-553-6847 or, locally, 703-605-6000

A single copy of each NRC draft report for comment is available free, to the extent of supply, upon written request as follows:

Address: Office of the Chief Information Officer, Reproduction and Distribution

Services Section

U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

E-mail: DISTRIBUTION@nrc.gov

Facsimile: 301-415-2289

Some publications in the NUREG series that are posted at NRC's Web site address http://www.nrc.gov/reading-rm/doc-collections/nuregs are updated periodically and may differ from the last printed version. Although references to material found on a Web site bear the date the material was accessed, the material available on the date cited may subsequently be removed from the site.

Non-NRC Reference Material

Documents available from public and special technical libraries include all open literature items, such as books, journal articles, and transactions, *Federal Register* notices, Federal and State legislation, and congressional reports. Such documents as theses, dissertations, foreign reports and translations, and non-NRC conference proceedings may be purchased from their sponsoring organization.

Copies of industry codes and standards used in a substantive manner in the NRC regulatory process are maintained at—

The NRC Technical Library Two White Flint North 11545 Rockville Pike Rockville, MD 20852–2738

These standards are available in the library for reference use by the public. Codes and standards are usually copyrighted and may be purchased from the originating organization or, if they are American National Standards, from—

American National Standards Institute 11 West 42nd Street New York, NY 10036–8002 www.ansi.org 212–642–4900

Legally binding regulatory requirements are stated only in laws; NRC regulations; licenses, including technical specifications; or orders, not in NUREG-series publications. The views expressed in contractor-prepared publications in this series are not necessarily those of the NRC.

The NUREG series comprises (1) technical and administrative reports and books prepared by the staff (NUREG–XXXX) or agency contractors (NUREG/CR–XXXX), (2) proceedings of conferences (NUREG/CP–XXXX), (3) reports resulting from international agreements (NUREG/IA–XXXX), (4) brochures (NUREG/BR–XXXX), and (5) compilations of legal decisions and orders of the Commission and Atomic and Safety Licensing Boards and of Directors' decisions under Section 2.206 of NRC's regulations (NUREG–0750).





U.S. NUCLEAR REGULATORY COMMISSION Washington, D.C. 20555–0001

www.nrc.gov

NUREG-1542, Vol. 11





